

Having described the invention that which is claimed is:

1. An apparatus for controlling the rotation of a gear around a hub, said apparatus being comprised of a cam and an arm in combination with a rod adapted to contact the teeth of said gear,

said cam is a plate attached to an axle which is perpendicularly fixed to a planar base, wherein said plate is adapted to rotate around said axle in a plane parallel to said base,

said plate includes a first slot, a first groove and shoulder means for movably engaging said rod which is slidably attached to said base,

said first slot extends radially from the edge of said plate toward said axle, said first groove is formed in at least a peripheral portion of said plate between the top surface and the bottom surface of said plate and extends from said edge toward said axle, said first groove intersects said first slot;

said arm comprises a housing having two open ends and a hollow interior and a cylinder, said housing is fixed to said planar base and positioned thereon to avoid contact with said plate and to permit said cylinder to slidably move in said first groove,

said housing contains at least one coil in said hollow interior wherein said coil is adapted to conduct an electric current,

said cylinder includes a solid portion and hollow portion having a closed end, said solid portion is adapted to longitudinally slide within said coils in said hollow interior of said housing,

said hollow portion of said cylinder contains a second slot, a first biasing spring, a second biasing spring and a pin, said second slot is formed in opposite walls of said hollow portion and is parallel to the longitudinal axis of said cylinder, said second slot intersects said first slot when

660 said cylinder is slidably positioned in said first groove, said pin is positioned perpendicularly to
661 said longitudinal axis of said cylinder between said first biasing spring and said second biasing
662 spring and extends from said second slot into said first slot.